

REMARKS/ARGUMENTS

Claims 1-17 were previously pending in the application. Claims 1-17 are canceled; and new claims 18-37 are added herein. Assuming the entry of this amendment, claims 18-37 are now pending in the application. The Applicant hereby requests further examination and reconsideration of the application in view of the foregoing amendments and these remarks.

Support for new claims 18-37 is found as follows:

<u>New Claim</u>	<u>Support</u>
18	Figs. 3, 5-7
19	Figs. 3, 5-7
20	Figs. 3, 5-7
21	Figs. 3, 5-7
22	Figs. 3, 5-7
23	Fig. 5
24	Fig. 6
25	Fig. 7
26	Original Claim 1
27	Original Claim 2
28	Original Claim 3
29	Original Claim 4
30	Original Claim 5
31	Original Claim 6
32	Fig. 7
33	Figs. 3, 5-7
34	Figs. 3, 5-7
35	Original Claim 1
36	Figs. 3, 5-7
37	Original Claim 1

In paragraph 2 of the office action, the Examiner rejected claims 1-3, 5, and 17 under 35 U.S.C. 102(e) as being anticipated by Hashimoto. In paragraph 4, the Examiner rejected claims 4, 6, and 8-10 under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Hadjichristos. In paragraph 4, the Examiner rejected claims 16 under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Uriu. In paragraph 6, the Examiner rejected claims 7-15 under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Wright. Since claims 1-17 have been canceled, the Applicant submits that the rejections of those claims are moot.

For the following reasons, the Applicant submits that all of the now-pending claims are allowable over the cited references.

New Claims 18, 34, and 36

New claim 18 is directed to an apparatus for generating a transmission signal in a frequency band. The apparatus comprises a compensating filter, an amplifier connected downstream of the compensating filter, and a transmit filter connected downstream of the amplifier. The amplifier amplifies an outgoing signal. The transmit filter filters the amplified outgoing signal to suppress parts of the amplified outgoing signal outside of the band for the transmission signal. The compensating filter alters the outgoing signal to reduce one or more features generated by the transmit filter within the band

in the transmission signal. The cited references, whether considered alone or together, do not teach such a combination of features.

In particular, the cited references do not teach or even suggest a transmit filter connected downstream of an amplifier, where the transmit filter filters the amplified outgoing signal to suppress parts of the amplified outgoing signal outside of the band for the transmission signal, and the compensating filter alters the outgoing signal to reduce one or more features generated by the transmit filter within the band in the transmission signal.

Hashimoto, for example, teaches transmission root Nyquist filter (RNF) 101 connected downstream of inverse equalization processor 104, but the Examiner admitted on page 7 that "Hashimoto et al do not disclose the transmitter further comprising a power amplifier adapted to amplify the signal in readiness for transmission." Presumably, since transmission RNF filter 101 generates quadrature data (I and Q), if Hashimoto does have an amplifier, it would be part of radio transmitter 102, which is downstream of transmission RNF filter 101. As such, Hashimoto does not teach or even suggest a transmit filter connected downstream of an amplifier.

Moreover, there is no teaching in Hashimoto that inverse equalization processor 104 alters the outgoing signal to reduce one or more features generated by transmission RNF filter 101 within the band in the transmission signal. Rather, as explicitly taught throughout Hashimoto, inverse equalization processor 104 "provides a characteristic, which is opposite to a distortion characteristic on the radio propagation path received at a signal receiving time." See paragraph [0005]. See also paragraphs [0008], [0012], [0025], [0039], and [0042], and independent claims 1, 4, and 6. In other words, Hashimoto's inverse equalization processor 104 adjusts the outgoing signal for distortion introduced by the radio propagation path from the transmitter to a remote receiver. Hashimoto does not discuss anything about reducing distortion introduced by transmission RNF filter 101.

While it is true that Hadjichristos and Wright teach amplifiers, both Hadjichristos and Wright, like Hashimoto, fail to teach or even suggest a transmit filter connected downstream of any amplifier.

Other than disclosing a diplexer, Uriu fails to teach any of the recited features missing from the other references.

For all these reasons, the Applicant submits that new claim 18 is allowable over the cited references. For similar reasons, the Applicant submits that new claims 34 and 36 are allowable over the cited references. Since the rest of the claims depend variously from claims 18, 34, and 36, it is further submitted that those claims are also allowable over the cited references.

New Claim 23

According to new claim 23, a second sampler is connected between the amplifier and the transmit filter and samples the amplified outgoing signal to generate a second feedback signal, and a switch is connected to receive the first and second feedback signals and provides a selected one of the first and second feedback signals to the linearizer and to the compensating filter. In rejecting original claim 13, the Examiner stated, on page 8, that Wright discloses "a switch in the [feedback] path adapted to allow the sampling of the signal to occur downstream of the transmit filter for use in adjusting the compensating filter (314) or upstream from the transmit filter (316)," citing column 9, lines 5-11, and column 8, lines 16-38.

While it is true that Wright teaches a reconstruction filter 316 and a feedback path 132, there is no teaching in the cited passages or, for that matter, anywhere Wright, of a switch that allows selective sampling either downstream or upstream of reconstruction filter 316. The only feedback sampling taught in Wright is at coupler 130, which is located downstream of reconstruction filter 316.

The Applicant submits that this provides additional reasons for the allowability of new claim 23.

New Claims 26, 35, and 37

According to new claims 26, 35, and 37, the one or more features that the compensating filter reduces comprise at least one of a phase ripple, an amplitude ripple, and a group delay variation of the transmit filter within the band. In rejecting the original claims, the Examiner stated, on page 3, that Hashimoto teaches a compensating filter that counteracts the phase ripple and the amplitude ripple of the transmit filter within the band, and, on page 4, that Hadjichristos teaches a compensating filter that counteracts the group delay variation of the transmit filter within the band.

While it may be true that Hadjichristos teaches a compensating filter that counteracts group delay variation, Hadjichristos does not even teach a transmit filter. Thus, Hadjichristos cannot be said to teach a compensating filter that counteracts the group delay variation of a transmit filter within the band.


As for Hashimoto, even if it were true that Hashimoto teaches a compensating filter that counteracts phase ripple and amplitude ripple (which the Applicant does not admit), there is no teaching or even suggestion in Hashimoto that that phase ripple and amplitude ripple correspond to Hashimoto's transmission RNF filter 101.

The Applicant submits that this provides additional reasons for the allowability of new claims 26, 35, and 37 (and therefore new claims 27-31) over the cited references.

In view of the above amendments and remarks, the Applicant believes that the now-pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Respectfully submitted,

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